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			ART UNIT 1792	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USPTOmail@beyerlaw.com

Office Action Summary	Application No. 10/685,739	Applicant(s) LARSON ET AL.	
	Examiner Rudy Zervigon	Art Unit 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 13-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 13-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) ☐ Notice of References Cited (PTO-892) | 4) ☐ Interview Summary (PTO-413) |
| 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) ☐ Information Disclosure Statement(s) (PTO/SB/08) | 5) ☐ Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) ☐ Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114 was filed in this application after a decision by the Board of Patent Appeals and Interferences, but before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or the commencement of a civil action. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on October 29, 2009 has been entered.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-7, 9, 15, 17, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motoda; Takashi et al. (US 5,496,408 A) in view of Shinozuka; Shyuhei et al. (US 6,315,858 B1). Motoda teaches an apparatus (Figure 7; column 10, line 23 - column 11, line 47) for providing a gas ("impurity gas" on 43a; Figure 7) from a gas supply ("impurity gas" on 43a; Figure 7) to at least two different zones (28, 50a-c, 46a-c; Figure 7; column 10, line 23 - column 11, line 47) in a process chamber (3; Figure 7), comprising: a flow divider ("T" near 43a; Figure 7) for providing a fluid connection to the gas supply ("impurity gas" on 43a; Figure 7), wherein the flow divider ("T" near 43a; Figure 7) splits gas ("impurity gas" on 43a; Figure 7) flow from the gas supply ("impurity gas" on 43a; Figure 7) into a plurality of legs (immediate

Art Unit: 1792

upstream of “ T “ near 43a; Figure 7); a master leg (connecting 43a and 44; Figure 7) in fluid connection with the flow divider (“ T “ near 43a; Figure 7), wherein the master leg (connecting 43a and 44; Figure 7) comprises a master supply line (connecting 43a and 44; Figure 7) and a master fixed orifice¹ (inherent, all piping have “orifice”; Compare with Applicant’s Figure 19); and a first slave leg (connecting 43a and 50a; Figure 7) in fluid connection with the flow divider (“ T “ near 43a; Figure 7) and in parallel with the master leg (connecting 43a and 44; Figure 7), wherein the first slave leg (connecting 43a and 50a; Figure 7) comprises: a first slave leg (connecting 43a and 50a; Figure 7) valve (29); and a first slave leg (connecting 43a and 50a; Figure 7) fixed orifice (inherent, all piping have “orifice”; Compare with Applicant’s Figure 19) - claim 1. Applicant’s amended claim 1 requirements of “...is an immovable...having an aperture whose size cannot be changed after manufacture of the master fixed orifice” are believed to be claim requirements of intended use in the pending apparatus claims. Setting the opening size to a set value in Motoda apparatus demonstrates a static, immovable operation.

With respect to Applicant’s amended claim limitations “and wherein the master fixed orifice² (inherent, all piping have “orifice”; Compare with Applicant’s Figure 19)/first slave leg (connecting 43a and 50a; Figure 7) fixed orifice is constructed such that gas passing through the master fixed orifice³ (inherent, all piping have “orifice”; Compare with Applicant’s Figure 19)/first slave leg (connecting 43a and 50a; Figure 7) fixed orifice encounters a higher resistance than the resistance encountered for gas passing through the master supply line (connecting 43a

¹ Orifice **n** – an opening though which something may pass. Merriam-Webster’s Collegiate Dictionary - 10th Ed. p.820

² Orifice **n** – an opening though which something may pass. Merriam-Webster’s Collegiate Dictionary - 10th Ed. p.820

³ Orifice **n** – an opening though which something may pass. Merriam-Webster’s Collegiate Dictionary - 10th Ed. p.820

Art Unit: 1792

and 44; Figure 7)/first slave leg (connecting 43a and 50a; Figure 7) supply line” (claim 1) is also believed to be an intended use of the Motoda apparatus. The claimed relative “resistance” is achieved in Motodo by his numerous valves, mass flow controllers, and control circuit. See Figure 1,7.

Further, it has been held that claim language that simply specifies an intended use or field of use for the invention generally will not limit the scope of a claim (Walter , 618 F.2d at 769, 205 USPQ at 409; MPEP 2106). Additionally, in apparatus claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim (In re Casey, 152 USPQ 235 (CCPA 1967); In re Otto , 136 USPQ 458, 459 (CCPA 1963); MPEP 2111.02).

Motoda further teaches:

- i. The apparatus (Figure 7; column 10, line 23 - column 11, line 47), as recited in claim 1, further comprising: a second slave leg (connecting 43a and 50b; Figure 7) in fluid connection with the flow divider (“T” near 43a; Figure 7) and in parallel with the master leg (connecting 43a and 44; Figure 7) and the first slave leg (connecting 43a and 50a; Figure 7), wherein the second slave leg (connecting 43a and 50b; Figure 7) comprises: a second slave leg (connecting 43a and 50b; Figure 7) valve (29); and a second slave leg (connecting 43a and 50b; Figure 7) fixed orifice (inherent, all piping have “orifice”; see Footnote 1; Compare with Applicant’s Figure 19), as claimed by claim 2
- ii. The apparatus (Figure 7; column 10, line 23 - column 11, line 47), as recited in claim 2, further comprising: a third slave leg (connecting 43a and 50c; Figure 7) in fluid

Art Unit: 1792

connection with the flow divider (“ T “ near 43a; Figure 7) and in parallel with the master leg (connecting 43a and 44; Figure 7), the first slave leg (connecting 43a and 50a; Figure 7), and the second slave leg (connecting 43a and 50b; Figure 7), wherein the third slave leg (connecting 43a and 50c; Figure 7) comprises: a third slave leg (connecting 43a and 50c; Figure 7) valve (29); and a third slave leg (connecting 43a and 50c; Figure 7) fixed orifice (inherent, all piping have “orifice”; see Footnote 1; Compare with Applicant’s Figure 19), as claimed by claim 3

- iii. A semiconductor chip formed using the apparatus (Figure 7; column 10, line 23 - column 11, line 47), as recited in claim 1, as claimed by claim 17 – Applicant’s “A semiconductor chip formed using the apparatus” is a recitation of intended use. Further, it has been held that claim language that simply specifies an intended use or field of use for the invention generally will not limit the scope of a claim (Walter , 618 F.2d at 769, 205 USPQ at 409; MPEP 2106). Additionally, in apparatus claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim (In re Casey, 152 USPQ 235 (CCPA 1967); In re Otto , 136 USPQ 458, 459 (CCPA 1963); MPEP 2111.02).
- iv. The apparatus, as recited in claim 18, further comprising a joining manifold (28; Figure 7) for combining output from the first slave leg (connecting 43a and 50a; Figure 7), the second slave leg (connecting 43a and 50b; Figure 7), and the third slave leg (connecting 43a and 50c; Figure 7) connected between the first slave leg (connecting 43a and 50a; Figure 7), the second slave leg (connecting 43a and 50b; Figure 7), and the third slave leg

Art Unit: 1792

(connecting 43a and 50c; Figure 7) and a zone (28; Figure 7) of the at least two zones (28, 50a-c, 46a-c; Figure 7; column 10, line 23 - column 11, line 47) of the process chamber (3; Figure 7), as claimed by claim 19

- v. The apparatus, as recited in claim 3, further comprising a joining manifold (28; Figure 7) for combining output from the first slave leg (connecting 43a and 50a; Figure 7), second slave leg (connecting 43a and 50b; Figure 7), and the third slave leg (connecting 43a and 50c; Figure 7) connected between the first slave leg (connecting 43a and 50a; Figure 7), second slave leg (connecting 43a and 50b; Figure 7), and the third slave leg (connecting 43a and 50c; Figure 7) and a zone (28; Figure 7) of a process chamber (3; Figure 7), as claimed by claim 20

Motoda does not teach:

- i. wherein the master fixed orifice⁴ (inherent, all piping have “orifice”; Compare with Applicant’s Figure 19) is a flat plate fixed orifice – claim 1
- ii. wherein the immovable flat plate fixed orifice has no vanes - claim 1
- iii. Motoda’s apparatus (Figure 7; column 10, line 23 - column 11, line 47), as recited in claim 3, further comprising: a fourth slave leg in fluid connection with Motoda’s flow divider (“ T “ near 43a; Figure 7) and in parallel with Motoda’s master leg (connecting 43a and 44; Figure 7), Motoda’s first slave leg (connecting 43a and 50a; Figure 7), Motoda’s second slave leg (connecting 43a and 50b; Figure 7), and Motoda’s third slave leg (connecting 43a and 50c; Figure 7), wherein the fourth slave leg comprises: a fourth slave leg valve; and a fourth slave leg fixed orifice (inherent, all piping have “orifice”;

see Footnote 1; Compare with Applicant's Figure 19); and a fifth slave leg in fluid connection with Motoda's flow divider (" T " near 43a; Figure 7) and in parallel with Motoda's master leg (connecting 43a and 44; Figure 7), Motoda's first slave leg (connecting 43a and 50a; Figure 7), Motoda's second slave leg (connecting 43a and 50b; Figure 7), Motoda's third slave leg (connecting 43a and 50c; Figure 7), and The fourth slave leg, wherein The fifth slave leg comprises: a fifth slave leg valve; and a fifth slave leg fixed orifice (inherent, all piping have "orifice"; see Footnote 1; Compare with Applicant's Figure 19), as claimed by claim 4

- iv. Motoda's apparatus (Figure 7; column 10, line 23 - column 11, line 47), as recited in claim 4, further comprising a tuning gas system in fluid connection with at least one of Motoda's master leg (connecting 43a and 44; Figure 7), first slave leg (connecting 43a and 50a; Figure 7), second slave leg (connecting 43a and 50b; Figure 7), third slave leg (connecting 43a and 50c; Figure 7), fourth slave leg, and fifth slave leg, as claimed by claim 5
- v. Motoda's apparatus (Figure 7; column 10, line 23 - column 11, line 47), as recited in claim 5, wherein The tuning gas system comprises: at least one tuning gas source; and at least one mass flow controller, as claimed by claim 6
- vi. Motoda's apparatus (Figure 7; column 10, line 23 - column 11, line 47), as recited in claim 6, wherein The tuning gas system is in fluid connection with Motoda's master leg (connecting 43a and 44; Figure 7) down stream from Motoda's master fixed orifice

⁴ Orifice *n* – an opening though which something may pass. Merriam-Webster's Collegiate Dictionary - 10th Ed. p.820

Art Unit: 1792

(inherent, all piping have “orifice”; see Footnote 1; Compare with Applicant’s Figure 19),
as claimed by claim 7

- vii. Motoda’s apparatus (Figure 7; column 10, line 23 - column 11, line 47), as recited in claim 8, wherein the first, second, third, fourth, and fifth leg fixed orifices (inherent, all piping have “orifice”; see Footnote 1; Compare with Applicant’s Figure 19) are flat plate fixed orifices, as claimed by claim 9
- viii. Motoda’s apparatus (Figure 7; column 10, line 23 - column 11, line 47), as recited in claim 1, wherein Motoda’s master fixed orifice (inherent, all piping have “orifice”; see Footnote 1; Compare with Applicant’s Figure 19) and Motoda’s first leg fixed orifices (inherent, all piping have “orifice”; see Footnote 1; Compare with Applicant’s Figure 19) are flat plate fixed orifices, as claimed by claim 15

Shinozuka teaches a process gas delivery apparatus (Figure 5; column 4; lines 51-58) including an equivalent flat plate fixed orifice (39; Figure 5, 6) and a tuning gas system (column 4; lines 51-58) including mass flow controllers (43, 49; Figure 2) for process gas delivery and control.

It would have been obvious to one of ordinary skill in that art at the time the invention was made for Motoda to add Shinozuka’s equivalent flat plate fixed orifice (39; Figure 5, 6) and tuning gas system (column 4; lines 51-58) including mass flow controllers (43, 49; Figure 2) for process gas delivery and control, inclusive, for Motoda to reproduce his slave leg apparatus parts.

Motivation for Motoda to add Shinozuka’s equivalent flat plate fixed orifice (39; Figure 5, 6) and tuning gas system (column 4; lines 51-58) including mass flow controllers (43, 49; Figure 2) is for process gas delivery and control resulting in area-specific substrate processing as taught by Shinozuka (column 1, line 64 – column 2, line 8). Further, it is well established that the

Art Unit: 1792

duplication of parts is obvious (In re Harza , 274 F.2d 669, 124 USPQ 378 (CCPA 1960) MPEP 2144.04).

Further, it is established that the use of a one piece construction instead of interconnected components is obvious (In re Larson, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965), MPEP 2144.04).

4. Claims 8, 11, 13, 14, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motoda; Takashi et al. (US 5,496,408 A) and Shinozuka; Shyuhei et al. (US 6,315,858 B1) in view of Ohmi; Tadahiro et al. (US 5,313,982 A). Motoda and Shinozuka are discussed above. Motoda and Shinozuka do not teach Motoda's apparatus (Figure 7; column 10, line 23 - column 11, line 47), as recited in claim 7, further comprising a zone selection device connected to Motoda's master leg (connecting 43a and 44; Figure 7) down stream from Motoda's master fixed orifice (inherent, all piping have "orifice"; see Footnote 1; Compare with Applicant's Figure 19), as claimed by claim 8

Motoda and Shinozuka do not teach:

- i. Motoda's apparatus (Figure 7; column 10, line 23 - column 11, line 47), as recited in claim 1, further comprising a zone selection device connected to Motoda's master leg (connecting 43a and 44; Figure 7) down stream from Motoda's master fixed orifice (inherent, all piping have "orifice"; see Footnote 1; Compare with Applicant's Figure 19), as claimed by claim 13
- ii. Motoda's apparatus (Figure 7; column 10, line 23 - column 11, line 47), as recited in claim 3, further comprising a zone selection device connected to Motoda's master leg (connecting 43a and 44; Figure 7) down stream from Motoda's master fixed orifice

Art Unit: 1792

- (inherent, all piping have “orifice”; see Footnote 1; Compare with Applicant’s Figure 19), as claimed by claim 14
- iii. Motoda’s apparatus (Figure 7; column 10, line 23 - column 11, line 47), as recited in claim 15, further comprising a zone selection device connected to Motoda’s master leg (connecting 43a and 44; Figure 7) down stream from Motoda’s master fixed orifice (inherent, all piping have “orifice”; see Footnote 1; Compare with Applicant’s Figure 19), as claimed by claim 17
- iv. An apparatus (Figure 7; column 10, line 23 - column 11, line 47) for providing a gas (“impurity gas” on 43a; Figure 7) from a gas supply (“impurity gas” on 43a; Figure 7) to at least two different zones (28, 50a-c, 46a-c; Figure 7; column 10, line 23 - column 11, line 47) in a process chamber (3; Figure 7), comprising: a flow divider (“ T “ near 43a; Figure 7) for providing a fluid connection to Motoda’s gas supply (“impurity gas” on 43a; Figure 7), wherein Motoda’s flow divider (“ T “ near 43a; Figure 7) splits gas (“impurity gas” on 43a; Figure 7) flow from Motoda’s gas supply (“impurity gas” on 43a; Figure 7) into a plurality of legs (immediate upstream of “ T “ near 43a; Figure 7); a master leg (connecting 43a and 44; Figure 7) in fluid connection with Motoda’s flow divider (“ T “ near 43a; Figure 7), wherein Motoda’s master leg (connecting 43a and 44; Figure 7) comprises a flat plate fixed orifice (inherent, all piping have “orifice”; see Footnote 1; Compare with Applicant’s Figure 19); a first slave leg (connecting 43a and 50a; Figure 7) in fluid connection with Motoda’s flow divider (“ T “ near 43a; Figure 7) and in parallel with Motoda’s master leg (connecting 43a and 44; Figure 7), wherein Motoda’s first slave leg (connecting 43a and 50a; Figure 7) comprises: a first slave leg

(connecting 43a and 50a; Figure 7) valve (29); and a first slave leg (connecting 43a and 50a; Figure 7) flat plate fixed orifice (inherent, all piping have “orifice”; see Footnote 1; Compare with Applicant’s Figure 19); a second slave leg (connecting 43a and 50b; Figure 7) in fluid connection with Motoda’s flow divider (“ T “ near 43a; Figure 7) and in parallel with Motoda’s master leg (connecting 43a and 44; Figure 7) and Motoda’s first slave leg (connecting 43a and 50a; Figure 7), wherein Motoda’s second slave leg (connecting 43a and 50b; Figure 7) comprises: a second slave leg (connecting 43a and 50b; Figure 7) valve (29); and a second slave leg (connecting 43a and 50b; Figure 7) flat plate fixed orifice (inherent, all piping have “orifice”; see Footnote 1; Compare with Applicant’s Figure 19); a third slave leg (connecting 43a and 50c; Figure 7) in fluid connection with Motoda’s flow divider (“ T “ near 43a; Figure 7) and in parallel with Motoda’s master leg (connecting 43a and 44; Figure 7), Motoda’s first slave leg (connecting 43a and 50a; Figure 7), and Motoda’s second slave leg (connecting 43a and 50b; Figure 7), wherein Motoda’s third slave leg (connecting 43a and 50c; Figure 7) comprises: a third slave leg (connecting 43a and 50c; Figure 7) valve (29); and a third slave leg (connecting 43a and 50c; Figure 7) flat plate fixed orifice (inherent, all piping have “orifice”; see Footnote 1; Compare with Applicant’s Figure 19); a tuning gas system in fluid connection with at least one of Motoda’s master leg (connecting 43a and 44; Figure 7), first slave leg (connecting 43a and 50a; Figure 7), second slave leg (connecting 43a and 50b; Figure 7), and third slave leg (connecting 43a and 50c; Figure 7), wherein The tuning gas system comprises: at least one tuning gas source; and at least one mass flow controller; and a zone selection device connected to Motoda’s master leg

(connecting 43a and 44; Figure 7) down stream from Motoda's master fixed orifice (inherent, all piping have "orifice"; see Footnote 1; Compare with Applicant's Figure 19), as claimed by claim 18.

- v. Fixed orifice that are "flat plate" fixed orifice – claim 18
- vi. wherein the immovable flat plate fixed orifice has not vanes – claim 18

Applicant's amended claim 18 requirements of "...is an immovable...having an aperture whose size cannot be changed after manufacture of the flat plate fixed orifice" are believed to be claim requirements of intended use in the pending apparatus claims. Setting the opening size to a set value in Motoda apparatus demonstrates a statis, immovable operation. Further, it has been held that claim language that simply specifies an intended use or field of use for the invention generally will not limit the scope of a claim (Walter , 618 F.2d at 769, 205 USPQ at 409; MPEP 2106). Additionally, in apparatus claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim (In re Casey, 152 USPQ 235 (CCPA 1967); In re Otto , 136 USPQ 458, 459 (CCPA 1963); MPEP2111.02).

With respect to Applicant's amended claim 18 limitations:

"and wherein the master fixed orifice⁵ (inherent, all piping have "orifice"; Compare with Applicant's Figure 19) is constructed such that gas passing through the master fixed orifice⁶ (inherent, all piping have "orifice"; Compare with Applicant's Figure 19) fixed orifice

⁵ Orifice *n* – an opening though which something may pass. Merriam-Webster's Collegiate Dictionary - 10th Ed. p.820

⁶ Orifice *n* – an opening though which something may pass. Merriam-Webster's Collegiate Dictionary - 10th Ed. p.820

Art Unit: 1792

encounters a higher resistance than the resistance encountered for gas passing through the master supply line (connecting 43a and 44; Figure 7)”

“

wherein the first slave leg (connecting 43a and 50a; Figure 7) fixed orifice is an immovable fixed orifice having an aperture whose size cannot be changed after manufacture of the first slave leg (connecting 43a and 50a; Figure 7) fixed orifice, wherein the immovable fixed orifice has no vanes, and wherein the first slave leg (connecting 43a and 50a; Figure 7) fixed orifice is constructed such that gas passing through the first slave leg (connecting 43a and 50a; Figure 7) fixed orifice encounters a higher resistance than the resistance encountered for gas passing through the first slave leg supply line (connecting 43a and 50a; Figure 7)

...

wherein the second slave leg (connecting 43a and 50b; Figure 7) fixed orifice is an immovable fixed orifice having an aperture whose size cannot be changed after manufacture of the second slave leg (connecting 43a and 50b; Figure 7) fixed orifice, wherein the immovable fixed orifice has no vanes, and wherein the second slave leg (connecting 43a and 50b; Figure 7) fixed orifice is constructed such that gas passing through the second slave leg (connecting 43a and 50b; Figure 7) fixed orifice encounters a higher resistance than the resistance encountered for gas passing through the second slave leg supply line (connecting 43a and 50b; Figure 7)

...

wherein the third slave leg (connecting 43a and 50c; Figure 7) fixed orifice is an immovable fixed orifice having an aperture whose size cannot be changed after manufacture of the third slave leg (connecting 43a and 50c; Figure 7) fixed orifice, wherein the immovable fixed orifice

Art Unit: 1792

has no vanes, and wherein the third slave leg (connecting 43a and 50c; Figure 7) fixed orifice is constructed such that gas passing through the third slave leg (connecting 43a and 50c; Figure 7) fixed orifice encounters a higher resistance than the resistance encountered for gas passing through the third slave leg supply line (connecting 43a and 50c; Figure 7)

“

are also believed to be an intended use of the Motoda apparatus. The claimed relative “resistance” is achieved in Motoda by his numerous valves, mass flow controllers, and control circuit. See Figure 1,7.

Ohmi teaches a zone selection device (“monoblock valves” inside dotted lines; Figure 4; column 10; lines 16-30) for a gas delivery apparatus (Figure 1).

It would have been obvious to one of ordinary skill in that art at the time the invention was made for Motoda and Shinozuka to add Ohmi’s zone selection device to Motoda and Shinozuka’s apparatus.

Motivation for Motoda and Shinozuka to add Ohmi’s zone selection device to Motoda and Shinozuka’s apparatus is for minimizing “dead zones” as taught by Shinozuka’s “monoblock valves” (column 9, lines 5-10).

Further, it is established that the use of a one piece construction instead of interconnected components is obvious (In re Larson, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965), MPEP 2144.04).

Response to Arguments

5. Applicant's arguments filed May 18, 2009 have been fully considered but they are not persuasive.

Art Unit: 1792

6. As recognized by Applicant, the point of disagreement in the pending application is summarized as:

“

The crux of the disagreement seems to revolve around two elements of claim 1: (1) "an immovable flat plate fixed orifice having an aperture whose size cannot be changed after manufacture of the flat plate fixed orifice"; and (2)"wherein the movable flat plate fixed orifice has no vanes.

“

In response, the Examiner notes that issue (1) above has, in-part, already been adjudicated by the BPAI's October 28, 2008 decision. In part, the BPAI concluded that the claimed "fixed orifice" is indeed not restricted to Applicant's specific example of "flat plate fixed orifice". See BPAI decision page 4. Further, the Board's citation of dependent claim 9 requiring the now independently claimed "flat plate fixed orifice", was treated by the Board in the analysis of the same 103 rejection reproduced by the Examiner above. The Board's conclusion correctly noted that Applicants did not (and presently do not) dispute the Examiner's *combination* of Motoda and Shinozuka. Rather, as is presently argued, Applicants disagree with the Examiner, and the Board's decision (pages 5-6), of how fixed is the Shinozuka's iris valve. Updating this argument to the newly claimed qualifiers "having an aperture whose size cannot be changed after manufacture of the flat plate fixed orifice", in the Examiner's opinion, does nothing to render the pending claims unobvious or detract from the Board's analysis. As noted above Motoda's aperture fixed orifice (inherent, all piping have "orifice"; Compare with Applicant's Figure 19) is not influenced by the manufacture of Shinozuka's flat plate fixed orifice (39; Figure 5, 6).

Persons of ordinary skill in the art recognize that the function of Shinozuka's flat plate fixed orifice (39; Figure 5, 6) is to fit inside of the orifice that it is intended to obstruct or not, thus the manufacture of both the conduit ("orifice") and the flat plate would necessarily be dimensioned during manufacture for the intended operation.

With respect to issue (2) above, the BPAI's October 28, 2008 decision does not address such a feature because the claimed feature was added after the BPAI's October 28, 2008 decision upon entry of an RCE (see May 18, 2009). However, as can be well appreciated by the skilled artisen, Shinozuka's flat plate fixed orifice (39; Figure 5, 6), made of vanes, is directly analogous to Applicant's own flat plate fixed orifice by making Shinozuka's vanes integral into one piece. Further, skilled artisens would also recognize that such integrated pieces can be made with varying orifice sizes and inserted into conduits. Likewise, it is established that the use of a one piece construction instead of interconnected components is obvious (In re Larson, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965), MPEP 2144.04).

Conclusion

7. This is a continuation of applicant's earlier Application No. 10685739. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

Art Unit: 1792

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Rudy Zervigon whose telephone number is (571) 272-1442. The examiner can normally be reached on a Monday through Thursday schedule from 8am through 7pm. The official fax phone number for the 1763 art unit is (571) 273-8300. Any Inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Chemical and Materials Engineering art unit receptionist at (571) 272-1700. If the examiner can not be reached please contact the examiner's supervisor, Parviz Hassanzadeh, at (571) 272-1435.

/Rudy Zervigon/

Primary Examiner, Art Unit 1792